

Curriculum Vitae of Prof. A. P. Mackenzie

Name: Andrew Peter Mackenzie

Date of Birth: 7.3.64

Nationality: British

Present Positions: Director
Department of Physics of Quantum Materials
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Professor of Condensed Matter Physics,
School of Physics and Astronomy,
University of St. Andrews,
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Education: University of Edinburgh (1982-86): BSc (1st class Hons.) in Physics.
University of Cambridge (1987-91): PhD in Physics.

Prizes, Bursaries and Fellowships:

1991 The Charles and Katherine Darwin Research Fellowship, Darwin College, Cambridge.
1993 Royal Society University Research Fellowship.
1999 Mott Lecturer at the Condensed Matter and Materials Physics conference of the UK Institute of Physics.
2001 Fellow of the Institute of Physics.
2004 Fellow of the Royal Society of Edinburgh.
2004 Daiwa-Adrian Prize for collaborative UK-Japanese research achievement.
2007 Ehrenfest Lecturer, Leiden, Netherlands
2008 Foreign Associateship, Canadian Institute for Advanced Research.
2011 Royal Society-Wolfson Research Merit Award
2011 Mott Medal and Prize of the UK Institute of Physics
2012 Fellow of the American Physical Society
2015 Fellow of the Royal Society

Editorship

2003-12 Reviewing Editor for Science Magazine
20018- Co-editor, Annual Review of Condensed Matter Physics

Visiting Scholar / Professorships

- 1995 Centro Atómico de Bariloche, Argentina
- 2003 Stanford University, USA
- 2004 Kyoto University, Japan
- 2006 Cornell University, USA
- 2009 National Institute for Material Science, Tsukuba, Japan
Salerno University, Italy
- 2010 Stanford University
- 2019 Hanna Visiting Scholar, Stanford University

Research Experience:

- 1985 Vacation studentship at CERN, Geneva, working on muon chamber group for "L3" experiment under Professor U. Becker (MIT).
- 1986-7 One year contract at CERN to continue research on L3 experiment.
- 1987-91 PhD entitled 'The role of stoichiometry in high temperature superconductivity' under the supervision of Prof. G. G. Lonzarich FRS.
- 1991-93 Research Associate at the IRC in Superconductivity, University of Cambridge.
- 1993-97 Royal Society University Research Fellow at the IRC in Superconductivity.
- 1997-2001 Royal Society University Research Fellow and Honorary Reader in Condensed Matter Physics at the University of Birmingham.
- 2001- Professor of Condensed Matter Physics at the University of St. Andrews.
- 2012- Director, Max Planck Institute for Chemical Physics of Solids, Dresden, Germany

Invited conference presentations since 1993:

- 1993 *Metal and Oxide Superconductors Conference*, Eugene, USA.
Condensed Matter and Materials Physics Conference, Leeds, UK.
- 1994 *Materials and Mechanisms of Superconductivity IV*, Grenoble, France.
Royal Society of Chemistry Symposium, Aberdeen, UK.
- 1995 *Physical Phenomena at High Magnetic Fields II*, Tallahassee, USA.
International Symposium on Frontiers of High T_c Superconductivity, Morioka, Japan.
8th International Symposium on Superconductivity, Hamamatsu, Japan.
- 1996 *Inaugural meeting of UK Superconductivity Forum*, London, UK.
Institute of Physics Low Temperature Group Conference, Nottingham, UK.
Condensed Matter and Material Physics Conference, York, UK.
- 1997 *Gordon Conference on Superconductivity*, Ventura, USA.

- American Physical Society March Meeting*, Kansas City, Missouri, USA.
Oxide Functional Materials, London, UK.
Mercury and Thallium Based Superconductors, Cambridge.
Strongly Correlated Electron Systems IX, Trieste, Italy.
Workshop on the Physics of Ruthenates and Manganites, Tallahassee, USA.
Condensed Matter and Material Physics Conference, Exeter, UK.
- 1998 *Strongly Correlated Electron Systems X*, Trieste, Italy.
Euroconference on Magnetism Today, Evora, Portugal.
EPSRC Theoretical Physics Summer School, Ambleside, UK.
Workshop on Low Dimensional Superconductors, Kyoto, Japan.
Condensed Matter and Material Physics Conference, Manchester, UK.
- 1999 *Pairing mechanisms and symmetry in superfluid He-3 and unusual Superconductors*, Cambridge, UK.
Institute of Physics Superconductivity Group Conference, Birmingham, UK.
Physics and Chemistry of Novel Materials: Strongly Correlated Electron Systems, Ascona, Switzerland.
22nd International Conference on Low Temperature Physics, Helsinki, Finland (plenary lecture).
Condensed Matter and Material Physics Conference, Leicester, UK (Mott Lecture).
- 2000 *Gordon Conference on Superconductivity*, Ventura, USA.
JRCAT Workshop on Electronic Phase Separation, Nara, Japan.
Gordon Conference on Strongly Correlated Systems, New Hampshire, USA.
Strongly Correlated Electron Systems XII, Trieste, Italy.
High Temperature Superconductivity, Santa Barbara, USA.
Trends in Condensed Matter Physics, Ascona, Switzerland.
Superconductivity of d- and f-electron metals, Dresden, Germany
- 2001 *German Physical Society*, Hamburg, Germany.
National Seminar for Solid State Physics, Groningen, Netherlands.
Magnetic Correlations, Metal-Insulator transitions and Superconductivity in Novel Materials, Dresden, Germany.
Physical Phenomena at High Magnetic Fields V, Santa Fe, New Mexico (talk given by Dr. S. Grigera).
Ruthenates and rutheno-cuprates: theory and experiments, Naples, Italy.
VIII International Workshop on Vortex Physics, Bariloche, Argentina
- 2002 *American Physical Society*, Indianapolis, USA
International Workshop on Non-Fermi Liquid Physics in Transition Metal and Rare Earth Compounds, Bled, Slovenia
Emergent Materials and Highly Correlated Electrons, Trieste, Italy.
BA Festival of Science, Leicester, UK

- 2003 *Joint Magnetism Workshop*, Glasgow
Magnetic Model Systems, Oxford
ICAM New York Workshop on Quantum Criticality, New York, USA (talk given by Dr. S. Grigera).
NEDO Florida Workshop on Novel Superconductivity and Magnetism, Key West, Florida, USA (talk given by Dr. S. Grigera).
Frontiers in High-Field Physics, Los Alamos, USA
- 2004 *Gordon Research Conference on Strongly Correlated Systems*, Massachusetts, USA
Quantum Fluids and Solids 2004, Trento, Italy
European Physical Society Prague, Czech Republic
Quantum Phase Transitions, Bad Honnef, Germany
Spin-Triplet Superconductivity and Ruthenate Physics, Kyoto, Japan
- 2005 *Kavli Institute for Theoretical Physics Workshop on Quantum Criticality*, Santa Barbara, USA
St Andrews Workshop on Strongly Correlated Electrons & Complexity, St Andrews
Physics 2005, a century after Einstein, Warwick, UK
Strongly Correlated Electron Systems 05, Vienna, Austria
Strongly Correlated Electron Materials: Physics and Nanoengineering, San Diego, USA
24th International Conference on Low Temperature Physics, Orlando, USA
Functional Transition Metal Compounds & Multiferroics, Cologne, Germany
International Network for Young Scientists: Intermetallics, Superconductors and Quantum Fluids at Low Temperatures. Stara Lesna, Slovakia
- 2006 *Quantum Materials*, Korean Institute for Advanced Study, Seoul, Korea
Frontiers in Correlated Matter: Designing Emergent Matter: A Fresh Start? Snowmass, USA
US Department of Energy Workshop: Basic Research Needs for Superconductivity Washington DC, USA
Theoretical & Experimental Magnetism, Oxford, UK
Quantum Materials, Canadian Institute for Advanced Research, Vancouver, Canada
- 2007 *BCS@50 (Celebration of the 50th anniversary of publication of the Bardeen-Cooper-Schrieffer theory of superconductivity)* Urbana, USA
A.I. Larkin Memorial Conference Chernogolovka, Russia
UK-Japan Expert Workshop on Advanced Materials Tokyo
Canadian Institute for Advanced Research Workshop on Advanced Materials, Montreal, Canada.
The Heavy Fermion Frontier, Los Alamos, New Mexico
Kavli Institute for Theoretical Physics Workshop on Sr₂RuO₄ and p+ip superconductivity, Santa Barbara, California.

- 2008 *Berkeley Mini-Statistical Mechanics Meeting*, Berkeley, California
American Physical Society March Meeting, New Orleans, Louisiana
Unconventional Phases and Phase Transitions in Strongly Correlated Electron Systems Dresden, Germany
Interplay between Superconductivity and Magnetism at the Nanometer Scale, European Science Foundation Exploratory Workshop, Salerno, Italy
International Workshop on Competing Orders, Pairing Fluctuations, and Spin-Orbit Effects in Novel Unconventional Superconductors, Dresden, Germany
Grand Challenges in Strong Correlations in Condensed Matter, STFC Exploratory Workshop, Manchester, UK
Emergent Behaviour in Heavy Electron Materials, Aspen, USA
Pacific Institute of Theoretical Physics Workshop: Quantum Criticality, Toronto, Canada
Canadian Institute for Advanced Research Quantum Materials Workshop, Vancouver, Canada
- 2009 *20th Anniversary Edgar Lüscher Seminar*, Klosters, Switzerland
AIST-RIKEN Joint Workshop: Emergent Phenomena in Strongly Correlated Electron Materials, Okinawa, Japan
Quantum Criticality and Novel Phase Formation, Dresden, Germany (Plenary Lecture)
New Computational Methods in Quantum Many-body Theory, Leiden, Netherlands
Superconductors by the Mediterranean Sea: Classic and Novel Materials, Electronic States and Critical Properties, Alghero, Italy
Novel Spin Pairing 2009, Kyoto, Japan
Novel Quantum Matter in Correlated Oxides, Kyoto, Japan
2009 Hangzhou Workshop on Quantum Matter, Hangzhou, China (declined)
Fermions 2009, Salzburg, Austria (Plenary Lecture)
Canadian Institute for Advanced Research Fall Meeting, Montreal, Canada
- 2010 *Sr₂RuO₄ Mini-Workshop*, Max Planck Institute Stuttgart
Theoretical Institute of Photon Science Workshop, Stanford, California
American Physical Society March Meeting, Portland, Oregon
Spectroscopy of Novel Superconductors, Shanghai, China
Strongly Correlated Electron Systems 2010, Santa Fe, New Mexico (Plenary Lecture)
Principles and Design of Strongly Correlated Electronic Systems, Trieste, Italy
Kavli International Seminar 'The Next Ten Years of Correlated Quantum Matter', Kavli Institute, UK
Emergent Quantum States in Complex Correlated Matter, Dresden, Germany
New Developments in Quantum Field Theory & Condensed Matter Physics, Stanford, California
- 2011 *Korea-UK Workshop on Strongly Correlated Electron Systems*, Seoul, Korea

- Canadian Institute for Advanced Research Cross-Programme Discussion Workshop*, Whistler, Canada
Black Hole Answers for Condensed Matter Questions Leiden, Netherlands
Physics by the Lake St Bees, UK
Superconductivity 100 Years Later: A Computational Approach Sardinia, Italy
Holographic Duality and Condensed Matter Physics Santa Barbara, USA
Condensed Matter and Materials Physics 2011, Manchester, UK (plenary)
- 2012 *UK-Japan Workshop on Strongly Correlated Electron Systems*, Tokyo, Japan
Multifunctional Materials and Nanoscale Phenomena, Vietri sul Mare, Italy
Gravity, Black Holes and Condensed Matter, Chicheley Hall, UK
Itinerant Spin-Orbit Systems: From Magnetic Frustration to Novel Superconductivity, Dresden, Germany
Gordon Research Conference on Strongly Correlated Systems, Mount Holyoke, USA
Spin-Orbit Physics 2012, Aspen, USA
- 2013 *Topological Quantum Matter, Strongly Correlated Electrons, and Quantum Information*, Shanghai, China
Quantum Phase Transitions, Experiment and Theory, Lauterbad, Germany
Topology, Correlations and Interfaces in Correlated Electron Systems, Paris, France
UBC-Max Planck Centre Conference, Stuttgart, Germany
- 2014 *Beyond quasiparticles: New paradigms for quantum fluids*, Aspen, USA
50th Karpacz Winter School on Condensed Matter Physics, Karpacz, Poland
Overarching Issues in the Theory of Highly Correlated Electron Fluids, Stanford, USA
Itinerant Magnetism and Superconductivity - IMS 2014, Dresden, Germany
27th International Conference on Low Temperature Physics, Buenos Aires, Argentina (plenary)
Quantum Field Theory, String Theory and Condensed Matter Physics, Chania, Greece
- 2015 *Frontiers in Unconventional Superconductivity and Magnetism*, Bristol, UK
German Physical Society, Berlin, Germany
Chemistry Meets Physics, Ringberg, Germany
Concepts and Discovery in Quantum Matter, Cambridge, UK
Theoretical and Experimental Magnetism 2015, Oxford, UK
11th International Conference on Materials and Mechanisms of Superconductivity, Geneva, Switzerland
High-temperature Superconductivity and Correlated Electrons, Ringberg, Germany.
- 2016 *Canadian Institute for Advanced Research Spring Meeting*, Toronto, Canada

- Strong Correlations and the Normal State of the High Temperature Superconductors*, Dresden, Germany
Graduierten Kolleg Workshop, Meissen, Germany
Superstripes 2016, Ischia, Italy
Quantum Criticality and Topology in Itinerant Electron Systems, Albuquerque, USA
Low Energy Challenges for High Energy Physicists II, Waterloo, Canada
DPG School in Physics, Bad Honnef, Germany
TopoMat 2016, Stuttgart, Germany
European Materials Research Society, Warsaw, Poland
Frontiers in Physical Sciences, Buenos Aires, Argentina
- 2017 *Disorder in Condensed Matter and Black Holes*, Leiden, Netherlands
German Physical Society Spring Meeting, Dresden, Germany
Condensed Matter, Quantum Technology and Quantum Materials, Dresden, Germany
TOP-SPIN 3: Spin and Topological Phenomena in Nanostructures — towards Topological Materials Science, Dresden, Germany
Scottish Universities Physics Alliance Annual General Meeting, Edinburgh, Scotland
CONDMAT 2017, Copenhagen, Denmark
Four Corners Symposium, Waterloo, Canada
Gordon Research Conference in Superconductivity, New Hampshire, USA
28th International Conference in Low Temperature Physics, Gothenburg, Sweden
Physics Next – From Quantum Fields to Condensed Matter, New York, USA
Exploratory Workshop on Condensed Matter Physics, Bariloche, Argentina
- 2018 *American Physical Society March Meeting*, Los Angeles, USA
Gordon Research Conference on Correlated Electron Systems, USA
Frustration, Orbital Fluctuations, and Topology in Kondo Lattices and their relatives, Dresden, Germany
Advances in Non-Fermi Liquids, Berkeley, USA
M²S-HTSC, Beijing, China
Bounding Transport and Chaos in Condensed Matter and Holography, Stockholm, Sweden
Summer School on Collective Behaviour in Quantum Matter, Trieste, Italy
Correlated Electrons in Transition-Metal Compounds: New Challenges, Dresden, Germany
CIFAR Quantum Materials Fall Meeting, Toronto, Canada
Correlated electron systems: Fermi surface topological transitions and effects of spin-orbit coupling, Loughborough, UK
- 2019 *SRitp Advanced School on Electron Hydrodynamics*, Tel Aviv, Israel
8th MANEP Winter School ‘New Twists in Matter’, Saas Fee, Switzerland
German Physical Society Annual Meeting, Regensburg, Germany
3rd Dresden-Weizmann Workshop, Dresden, Germany

Strongly Correlated Systems & Interactions in Quantum Matter, Princeton, USA
Workshop 'Strontium Ruthenate', Zürich, Switzerland
Low-D Quantum Condensed Matter 2019, Amsterdam, Netherlands
Quantum Criticality and Topology in Correlated Electron Systems Dresden, Germany
Strongly Correlated Electron Systems, Okayama, Japan
Workshop on Topology, Strongly Correlated Electronic Systems and Structurally Complex Structures, Dresden, Germany
Frontiers of Quantum Matter, Tel Aviv, Israel

- 2020 *Convergent Phenomena at High Magnetic Fields*, Tallahassee, USA
Gapless Fermions - from Fermi liquids to strange metals, Dresden, Germany
Summer Seminars for Correlated Electrons and Frustrated Magnets (virtual)
Return of the Intertwined: New Developments in Correlated Materials (virtual)
Coherent order and transport in spin-active systems (virtual)
MRS Spring Meeting, Phoenix, USA (cancelled)
Topological Quantum Science, Erice, Sicily (cancelled)
Superconductivity: from Microscopic Mechanisms to Topology to Macroscopic Properties, Trieste, Italy (cancelled)
Emergent Hydrodynamics in Condensed Matter and High-Energy Physics, Dresden, Germany (cancelled)
29th International Conference on Low Temperature Physics, Sapporo, Japan (cancelled)
Frontiers of Synchrotron Science, Sao Paulo, Brazil (cancelled)
- 2021 *2. Lüscher-Wassermann Seminar*, Klosters, Switzerland (cancelled)
Long Range Colloquium (virtual)

Invited Seminars and colloquia:

- 1992 Ecole Federale Polytechnique de Lausanne, Switzerland.
1993 Imperial College of Science and Technology, UK.
Centre d'Energie Atomique, Grenoble, France.
Naval Research Laboratory, Washington DC, USA.
1994 University of Leeds, UK.
Naval Research Laboratory, Washington, USA.
John Hopkins University, Baltimore, USA.
University of Virginia, USA.
AT&T Bell Laboratories, USA.
Princeton University, USA.
1995 University of Bristol, UK.
National High Field Laboratory, Tallahassee, USA.
University of Birmingham, UK.
AT&T Bell Laboratories, USA.
Centro Atómico de Bariloche, Argentina.

- 1996 University of St. Andrews, UK.
University of Edinburgh, UK.
Imperial College of Science and Technology, UK.
Kyoto University, Japan.
Hiroshima University, Japan.
Osaka University, Japan.
Institute for Solid State Physics, University of Tokyo, Japan.
Central Research Institute of the Electric Power Industry, Tokyo, Japan.
- 1997 Cavendish Laboratory, Cambridge, UK.
University of Birmingham, UK.
University of Bristol, UK.
- 1998 Massachusetts Institute of Technology, USA.
Cavendish Laboratory, Cambridge, UK.
University of Warwick, UK.
Imperial College, London, UK.
Brookhaven National Laboratory, USA.
Université de Paris Sud, France.
University of Oxford, UK.
University of Southampton, UK.
- 1999 University of Manchester, UK.
University of Lancaster, UK.
University of Cambridge, UK.
- 2000 University of Sheffield, UK.
Kyoto University, Japan.
University of St. Andrews, UK.
University of Wales at Swansea, UK.
- 2001 University of Cambridge, UK
University of Delft, Netherlands
Heriot-Watt University, UK
University of Oxford, UK
- 2002 University of Birmingham, UK
Toronto University, Canada
University of California, Berkeley, USA
- 2003 University of Bristol, UK
Stanford University, Stanford, USA (departmental colloquium and group seminar)
University of California, Los Angeles, USA
University of California, Berkeley, USA
University of British Columbia, Canada
Simon Fraser University, Canada
- 2004 Johnson Matthey Research, UK
Edinburgh University, UK
Birmingham University, UK
Kyoto University, Japan
- 2005 ESPCI, Paris, France
Nottingham University, UK
Royal Holloway, UK

- 2006 Lancaster University, UK
 Cornell University, USA
 Toronto University, Canada
 Boston University, USA
 Harvard University, USA
 Yale University, USA
- 2007 University of Illinois, USA
 Stanford University, USA
 IBM Almaden Research Centre, USA
 Columbia University, USA
 Kyoto University, Japan
 RIKEN, Tokyo, Japan
 Durham University, UK
 Princeton University, USA
- 2008 Harvard University, USA
- 2009 Stanford University, USA
 National Institute for Material Science, Tsukuba, Japan
 Salerno University, Italy
 Lawrence Berkeley National Laboratory, USA
- 2010 Cornell University, USA (seminar & colloquium)
 University of California at Irvine, USA
 University of California San Diego, USA
 Max-Planck Institute for Solid State Physics, Stuttgart, Germany
 University of California Berkeley, USA
- 2011 Stanford University, USA (seminar & colloquium)
 California Institute of Technology, USA
 University of California at Irvine, USA
 ETH Zurich, Switzerland
 Manchester University, UK
- 2012 Max Planck Institute for Solid State Physics, Stuttgart, Germany
 Max Planck Institute for Chemical Physics, Dresden, Germany
 Stanford University, USA
 Institute of Physics, Manchester, UK
 Cornell University, USA
- 2013 University of Leeds, UK
 Loughborough University, UK
 Leipzig University, Germany
 McMaster University, Canada
 University of Toronto, Canada
- 2014 Frankfurt University, Germany
 Universidad Nacional de La Plata, Argentina
 Universidad Autónoma de Madrid, Spain
- 2015 University of Stuttgart, Germany (colloquium)
 University of St Andrews, UK
 University of York, UK
- 2016 University of Strathclyde, UK

- Stanford University, USA
 Massachusetts Institute of Technology, USA
 AlbaNova Colloquium, Stockholm, Sweden (colloquium)
 Princeton University, USA
 University of Würzburg, Germany (colloquium)
- 2017 University of Waterloo, Canada
 Brookhaven National Laboratory, USA
 Cambridge University, UK
 Centro Atómico Bariloche, Argentina
- 2018 Karlsruhe Institute of Technology, Germany (colloquium)
 Max Planck Institute for Complex Systems, Dresden, Germany
 University of Oxford, UK
 Max Planck Institute for Structural Dynamics, Germany
 Harvard University, USA
 University of Geneva, Switzerland
- 2019 Stanford University, USA
 UC Berkeley, USA
 IST Austria, Austria
 Technion, Israel (colloquium)
- 2020 Stanford University, USA (colloquium)
 University of St Andrews, UK (virtual)
 Cornell University, USA (colloquium; virtual)
 Heraklion University, Greece (colloquium; virtual)

PUBLICATIONS OF A.P. MACKENZIE

1. *Characterisation and Transport Measurements on Single Crystals in the Bi-Sr-Cu-O System*,
 A.P. Mackenzie, E. Marseglia, I. Marsden, G. Lonzarich, C. Chen and B. Wanklyn, *Physica C* **162-164**, 1029 (1989).
2. *A Method to Overcome the Problem of Small Sample Tilts in Light Element Electron Microprobe Analysis*,
 A. P. Mackenzie, Proceedings of the XIIth International Conference on Electron Microscopy, Vol 2, p. 221 (pub. San Francisco Press) (1990).
3. *Growth and Characterisation of Co-doped $YBa_2Cu_3O_{7-x}$ Single Crystals*,
 C.T. Lin, S.X. Li, W.Z. Zhou, A.P. Mackenzie and W.Y. Liang, *Physica C* **176**, 285 (1991).
4. *Transparent Conducting Thin Films: Precise Measurement of the Oxygen Content*,
 J.R. Bellingham, A.P. Mackenzie and W. A. Phillips, *Appl. Phys. Lett.* **58**, 2506 (1991).

5. *Accurate Metal and Oxygen Analyses of Cuprate Single Crystals by Electron Probe Microanalysis*,
A.P. Mackenzie, Physica C **178**, 365 (1991).
6. *Temperature Dependence of Stoichiometry of Laser Ablated $YBa_2Cu_3O_{7-x}$ Thin Films*,
K. Scott, A.P. Mackenzie, W. Dineen and W. A. Phillips, Physica C **185-9**, 1983 (1991).
7. *Single Crystal Hall Effect and Stoichiometry in " $Bi_2Sr_2CuO_6$ "*,
S.D. Hughes, A.P. Mackenzie, J.R. Cooper, A. Carrington and J.S. Edmonds, Physica C **185-9**, 1243 (1991).
8. *Low Temperature Hall Effect in $Bi_2Sr_2CuO_{6-\delta}$* ,
A.P. Mackenzie, S.D. Hughes, J.R. Cooper, A. Carrington, C.Chen and B.M. Wanklyn, Phys. Rev. B **45**, 527 (1992).
9. *0.7 eV Excitation in $YBa_2Cu_3O_{7-x}$: Evidence from Single Crystal and Powder Samples*,
H.L. Dewing, E.K.H. Salje, K. Scott and A.P. Mackenzie, J. Phys. C **4**, L109 (1992).
10. *The growth of Zn-doped YBCO single crystals*,
C.T. Lin, S.X. Li, A.P. Mackenzie, W. Zhou, P.D. Hunneyball and W.Y. Liang, Physica C **193**, 129 (1992).
11. *Crystal Structure and Cation Stoichiometry of Superconducting $Tl_2Ba_2CuO_{6+\delta}$ Single Crystals*,
R.S. Liu, S.D. Hughes, R.J. Angel, T.P. Hackwell, A.P. Mackenzie and P.P. Edwards Physica C **198**, 203 (1992).
12. *The Variable Voltage Method for Calculating the Absorption Correction for Soft X-Rays*,
A.P. Mackenzie, in 'X-Ray Optics and Microanalysis 1992' eds. P.B. Kenway et al, pub. IOP Press, p. 127 (1992).
13. *Temperature Dependence of the Hall Angle in $YBa_2(Cu_{1-x}Co_x)_3O_{7-\delta}$* ,
A. Carrington, A.P. Mackenzie, C.T. Lin and J.R. Cooper, Phys. Rev. Lett. **69**, 2855 (1992).
14. *Recent Progress in Electron Probe Microanalysis*,
A.P. Mackenzie, Rep. Prog. Phys. **56**, 557 (1993) (An invited review article of 25000 words).
15. *Resistive Upper Critical Field of $Tl_2Ba_2CuO_6$ at Low Temperatures and High Magnetic Fields*,
A.P. Mackenzie, S.R. Julian, G.G. Lonzarich, A. Carrington, S.D. Hughes, R.S. Liu and D.C. Sinclair, Phys. Rev. Lett. **71**, 1238 (1993).
16. *Hall Effect and Resistivity of Oxygen-Deficient $YBa_2Cu_3O_{7-x}$ Thin Films*,
A. Carrington, D.J.C. Walker, A.P. Mackenzie and J.R. Cooper, Phys.Rev. B **48**, 13051 (1993).

17. *Resistive Upper Critical Field of Single Crystals of $Tl_2Ba_2CuO_6$* ,
A.P. Mackenzie, S.R. Julian, G.G. Lonzarich, A. Carrington, S.D. Hughes, R.S. Liu and D.C. Sinclair, *Journal of Superconductivity* **7**, 271 (1994).
18. *The Field Dependence of the Resistive Transition in $Tl_2Ba_2CuO_{6+\delta}$*
A. Carrington, A.P. Mackenzie, D.C. Sinclair and J.R. Cooper, *Phys. Rev. B* **49**, 13243 (1994).
19. *Flux Growth of Single Crystals of $(Sr, Ca)CuO_2$* ,
C.T. Lin, W. Zhou, A.P. Mackenzie, F. Gauthier and W.Y. Liang, *Journal of Crystal Growth* **140**, 72 (1994).
20. *The Resistive Upper Critical Field of the Cuprate Superconductors*,
A.P. Mackenzie, S.R. Julian, A. Carrington, G.G. Lonzarich, D.J.C. Walker, J.R. Cooper and D.C. Sinclair, *Physica C* **235-240**, 233 (1994).
21. *The Effect of Oxygen Depletion on the In-Plane Resistivity and Hall Coefficient of Crystalline Thin Films of $YBa_2(Cu_{1-x}Zn_x)_3O_{7-\delta}$*
D.J.C. Walker, A.P. Mackenzie and J.R. Cooper, *Physica C* **235-240**, 1335 (1994).
22. *Effects of Annealing Treatments on La doped Bi-2201 Single Crystals*,
Y. Dumont, C. Ayache, A. Carrington, G. Collin, S. Megtert and A.P. Mackenzie, *Physica C* **235-240**, 1515 (1994).
23. *Low energy excitations of highly correlated electron systems*,
S.R. Julian, A.P. Mackenzie, G.J. McMullan, C. Pfleiderer, F.S. Tautz, I.R. Walker and G.G. Lonzarich, *J. Low Temp. Phys.* **95**, 39 (1994).
24. *The Resistive Upper Critical Field of Oxygen-Deficient $YBa_2(Cu_{1-x}Zn_x)_3O_{7-\delta}$*
D.J.C. Walker, O. Laborde, A.P. Mackenzie, S.R. Julian, A. Carrington, J.W. Loram and J.R. Cooper, *Phys. Rev. B* **51**, 9375 (1995).
25. *The Structure and Stoichiometry of Orthorhombic and Tetragonal $Tl_2Ba_2CuO_6$ by Resonant Synchrotron X-ray Diffraction and Electron Probe Microanalysis*,
M.G. Aranda, D.C. Sinclair, J.P. Attfield and A.P. Mackenzie, *Phys. Rev. B* **51**, 12747 (1995).
26. *Transport Properties of Zinc-doped $YBa_2Cu_3O_{7-\delta}$ Thin Films*,
D.J.C. Walker, A.P. Mackenzie and J.R. Cooper, *Phys. Rev. B* **51**, 15653 (1995).
27. *Normal State Magnetotransport in Superconducting $Tl_2Ba_2CuO_{6+\delta}$ down to Millikelvin Temperatures*,
A.P. Mackenzie, S.R. Julian, C.T. Lin and D.C. Sinclair, *Phys. Rev. B* **53**, 5848 (1996).

28. *Novel Anisotropic Fermi-Liquid Behaviour of a Superconducting Layered Perovskite: Sr_2RuO_4 ,*
Y. Maeno, H. Hashimoto, K. Yoshida, S. Nishizaki, M. Nohara, T. Fujita, J.G. Bednorz, F. Lichtenberg, A.P. Mackenzie and N.E. Hussey, J. Phys. Soc. Japan **66**, 1405 (1997).
29. *Observation of Quantum Oscillations in Sr_2RuO_4 ,*
A.P. Mackenzie, S.R. Julian, A.J. Diver, G.J. McMullan, G.G. Lonzarich, Y. Maeno, S. Nishizaki and T. Fujita, Proc. 2nd Conference on Physical Phenomena at High Magnetic Fields, eds. Z. Fisk, L. Gor'kov, D. Meltzer and R. Schrieffer, pub. World Scientific p. 537 (1996).
30. *Angular Dependence of the C-axis Normal State Magnetoresistance in Single Crystal $Tl_2Ba_2CuO_{6+\delta}$,*
N.E. Hussey, J.R. Cooper, J.M. Wheatley, I.R. Fisher, A. Carrington, A.P. Mackenzie, C.T. Lin and O. Milat, Phys. Rev. Lett. **76**, 122 (1996).
31. *Quantum Oscillations in the Layered Perovskite Superconductor Sr_2RuO_4 ,*
A.P. Mackenzie, S.R. Julian, A.J. Diver, G.J. McMullan, M.P. Ray, G.G. Lonzarich, Y. Maeno, S. Nishizaki and T. Fujita, Phys. Rev. Lett. **76**, 3786 (1996).
32. *Calculation of Thermodynamic and Transport Properties of Sr_2RuO_4 at Low Temperatures Using Known Fermi Surface Parameters,*
A.P. Mackenzie, S.R. Julian, A.J. Diver, G.G. Lonzarich, N.E. Hussey, Y. Maeno, S. Nishizaki and T. Fujita, Physica C **263**, 510 (1996).
33. *The Low Temperature Properties of Overdoped $Tl_2Ba_2CuO_{6+\delta}$,*
A.P. Mackenzie and S.R. Julian, Proceedings of the Eighth International Symposium on Superconductivity, Springer Verlag (1996).
34. *The Hall Effect in the Two-Dimensional Metal Sr_2RuO_4 ,*
A.P. Mackenzie, N.E. Hussey, A.J. Diver, S.R. Julian, Y. Maeno, S. Nishizaki and T. Fujita, Phys. Rev. B **54**, 7425 (1996).
35. *Specific Heat of Low- T_c $Tl_2Ba_2CuO_{6+\delta}$,*
A. Carrington, A.P. Mackenzie and A.W. Tyler, Phys. Rev. B **54**, 3788 (1996).
36. *Comment on "Extended Van Hove Singularity in a Noncuprate Layered Superconductor Sr_2RuO_4 " ,*
A.P. Mackenzie, S.R. Julian, G.G. Lonzarich, Y. Maeno and T. Fujita, Phys. Rev. Lett. **78** 2271 (1997).
37. *Effect of the Reversibility Region on the Low Temperature Vortex Structure Imaged by Bitter Magnetic Decoration,*
F. Pardo, A.P. Mackenzie, F. de la Cruz and J. Guimpel, Phys. Rev. B **55**, 14610 (1997).

38. *Hall Effect of Single Layer, Tetragonal $Tl_2Ba_2CuO_{6+\delta}$ Near Optimal Doping*, A.W. Tyler and A.P. Mackenzie Physica C **282-287**, 1185 (1997).
39. *Ab-plane Surface Impedance of the Single-Layer Cuprate $Tl_2Ba_2CuO_{6+\delta}$* , D.M. Broun, D. Morgan, R. Ormeno, A.W. Tyler, A.P. Mackenzie and J.R. Waldram, Physica C **282-287**, 1467 (1997).
40. *In-plane Microwave Conductivity of the Single-Layer Cuprate $Tl_2Ba_2CuO_{6+\delta}$* , D.M. Broun, D.C. Morgan, R.J. Ormeno, S.F. Lee, A.W. Tyler, A.P. Mackenzie and J.R. Waldram, Phys. Rev. B **56**, R11443 (1997).
41. *High Field Study of Normal State Magneto-transport in $Tl_2Ba_2CuO_{6+\delta}$* , A.W. Tyler, Y. Ando, F.F. Balakirev, A. Passner, G.S. Boebinger, A.J. Schofield, A.P. Mackenzie and O. Laborde, Phys. Rev. B **57**, R728 (1998).
42. *Extremely Strong Dependence of Superconductivity on Disorder in Sr_2RuO_4* , A.P. Mackenzie, R.K.W. Haselwimmer, A.W. Tyler, G.G. Lonzarich, Y. Mori, S. Nishizaki and Y. Maeno, Phys. Rev. Lett. **80**, 161 (1998).
43. *The Fermi Surface Topography of Sr_2RuO_4* , A.P. Mackenzie, S. Ikeda, Y. Maeno, T. Fujita, S.R. Julian and G.G. Lonzarich, J. Phys. Soc. Jpn. **67**, 385 (1998).
44. *Normal State Magnetoresistance of Sr_2RuO_4* , N.E. Hussey, A.P. Mackenzie, J.R. Cooper, S. Nishizaki, Y. Maeno and T. Fujita, Phys. Rev. B **57**, 5505 (1998).
45. *Superconducting Magnetisation above the Irreversibility Line in $Tl_2Ba_2CuO_{6+\delta}$* , C. Bergemann, A.W. Tyler, A.P. Mackenzie, J.R. Cooper, S.R. Julian and D.E. Farrell, Phys. Rev. B **57**, 14387 (1998).
46. *High Temperature Resistivity of Sr_2RuO_4 : Bad Metallic Transport in a Good Metal*, A.W. Tyler, A.P. Mackenzie, S. NishiZaki and Y. Maeno, Phys. Rev. B **58**, R10107 (1998).
47. *Observation of a Square Flux Line Lattice in the Unconventional Superconductor Sr_2RuO_4* , T.M. Riseman, P.G. Kealey, E.M. Forgan, A.P. Mackenzie, L.M. Galvin, A.W. Tyler, S.L. Lee, C. Ager, D. McK. Paul, C.M. Aegerter, R. Cubitt, Z.Q. Mao, T. Akima and Y. Maeno, Nature **396**, 242 (1998).
48. *Observation of Quantum Oscillations in the Electrical Resistivity of $SrRuO_3$* , A.P. Mackenzie, J.W. Reiner, A.W. Tyler, L.M. Galvin, S.R. Julian, M.R. Beasley, T.H. Geballe and A. Kapitulnik, Phys. Rev. B **58**, R13318 (1998).
49. *Sr_2RuO_4 : Normal State Properties and the Effect of Disorder*, A.P. Mackenzie, J. Supercon. **12**, 543 (1999).

50. *Normal State, Superconductivity and Quasiparticle Fermi Surface of the Strongly Correlated Oxide Sr_2RuO_4* ,
S.R. Julian, A.P. Mackenzie, G.G. Lonzarich, C. Bergemann, R.K.W. Haselwimmer, Y. Maeno, S. NishiZaki, A.W. Tyler, S. Ikeda and T. Fujita, *Physica B* **261**, 928 (1999).
51. *Quantum Oscillations and Overcritical Torque Interaction in Sr_2RuO_4* ,
C. Bergemann, S.R. Julian, A.P. Mackenzie, A.W. Tyler, D.E. Farrell, Y. Maeno and S. NishiZaki, *Physica C* **318**, 444 (1999).
52. *The Unconventional Superconductivity of Sr_2RuO_4* ,
E.M. Forgan, A.P. Mackenzie and Y. Maeno, *J. Low Temp. Phys.* **117**, 1567 (1999).
53. *Detailed Fermi surface topography of Sr_2RuO_4* ,
C. Bergemann, S.R. Julian, A.P. Mackenzie, S. Nishizaki and Y. Maeno, *Phys. Rev. Lett.* **84**, 2662 (2000).
54. *Vortex lattice structures and pairing symmetry in Sr_2RuO_4* ,
D.F. Agterberg, R. Heeb, P.G. Kealey, T.M. Riseman, E.M. Forgan, A.P. Mackenzie, L.M. Galvin, R.S. Perry, S.L. Lee, D. M^cK. Paul, R. Cubitt, Z.Q. Mao, S. Akima and Y. Maeno, *Physica C* **341**, 1643 (2000).
55. *A reconstruction from small-angle neutron scattering measurements of the real space magnetic field distribution in the mixed state of Sr_2RuO_4*
P.G. Kealey, T.M. Riseman, E.M. Forgan, L.M. Galvin, A.P. Mackenzie, S.L. Lee, D. M^cK. Paul, R. Cubitt, D.F. Agterberg, R. Heeb, Z.Q. Mao and Y. Maeno, *Phys. Rev. Lett.* **84**, 6094 (2000).
56. *P-wave superconductivity*
A.P. Mackenzie and Y. Maeno, *Physica B* **280**, 148 (2000).
57. *Hall effect of $Sr_3Ru_2O_7$*
R.S. Perry, L.M. Galvin, A.P. Mackenzie, D.M. Forsythe, S.R. Julian, S. Ikeda and Y. Maeno, *Physica B* **280**, 1469 (2000).
58. *Metamagnetism and critical fluctuations in high quality single crystals of the bilayer ruthenate $Sr_3Ru_2O_7$*
R.S. Perry, L.M. Galvin, S.A. Grigera, L. Capogna, A.J. Schofield, A.P. Mackenzie, M. Chiao, S.R. Julian, S. Ikeda, S. Nakatsuji, Y. Maeno and C. Pfleiderer, *Phys. Rev. Lett.* **86**, 2661 (2001).
59. *The Hall effect in single crystal $Ca_{2-x}Sr_xRuO_4$*
L.M. Galvin, R.S. Perry, A.W. Tyler, A.P. Mackenzie, S. Nakatsuji and Y. Maeno, *Phys. Rev. B* **63**, 161102 (2001).
60. *Normal state of the unconventional superconductor Sr_2RuO_4 in high magnetic fields*

C. Bergemann, J.S. Brooks, L. Balicas, A.P. Mackenzie, S.R. Julian, Z.Q. Mao and Y. Maeno, *Physica B* **294**, 371 (2001).

61. *Magnetic-field tuned quantum criticality in the metallic ruthenate $Sr_3Ru_2O_7$*
S.A. Grigera, R.S. Perry, A.J. Schofield, M. Chiao, S.R. Julian, G.G. Lonzarich, S.I. Ikeda, Y. Maeno, A.J. Millis and A.P. Mackenzie, *Science* **294**, 329 (2001).

62. *Sensitivity to disorder of the metallic state in ruthenates*
L. Capogna, A.P. Mackenzie, R.S. Perry, S.A. Grigera, L.M. Galvin, P. Raychaudhuri, A.J. Schofield, C.S. Alexander, G. Cao, S.R. Julian and Y. Maeno, *Phys. Rev. Lett.* **88**, 076602 (2002).

63. *Induced metamagnetism in the itinerant bilayer ruthenate $Sr_3Ru_2O_7$*
L. Capogna, E.M. Forgan, G.J. McIntyre, N. Burton, P.G. Kealey, R.S. Perry, L.M. Galvin, A.P. Mackenzie, S. Ikeda and Y. Maeno, *Appl. Phys. A* **74**, S926 (2002).

64. *Fermi liquid ground state in overdoped cuprates*
C. Proust, E. Boaknin, R.W. Hill, L. Taillefer and A.P. Mackenzie, *Phys. Rev. Lett.* **89**, 147003 (2002).

65. *Novel quantum order in the ruthenates*
A.P. Mackenzie, Y. Maeno and S.R. Julian, *Physics World* **15**, 33 (2002).

66. *Evolution of Fermi liquid interactions in Sr_2RuO_4 under pressure*
D. Forsythe, S.R. Julian, C. Bergemann, E. Pugh, M.J. Steiner, P.L. Alireza, G.J. McMullan, F. Nakamura, R.K.W. Haselwimmer, I.R. Walker, S.S. Saxena, G.G. Lonzarich, A.P. Mackenzie, Z.Q. Mao and Y. Maeno, *Phys. Rev. Lett.* **89**, 166402 (2002).

67. *A metamagnetic quantum critical end point in $Sr_3Ru_2O_7$*
S.A. Grigera, A.P. Mackenzie, A.J. Schofield, S.R. Julian and G.G. Lonzarich, *Int. J. Mod. Phys. B* **16**, 3258 (2002).

68. *Observation of two-dimensional spin fluctuations in the bilayer ruthenate $Sr_3Ru_2O_7$ by inelastic neutron scattering*
L. Capogna, E.M. Forgan, S.M. Hayden, A. Wildes, J.A. Duffy, A.P. Mackenzie, R.S. Perry, S. Ikeda, Y. Maeno and S.P. Brown, *Phys. Rev. B* **67**, 012504 (2003).

69. *The superconductivity of Sr_2RuO_4 and the physics of spin-triplet pairing*
A.P. Mackenzie and Y. Maeno, *Rev. Mod. Phys.* **75**, 657 (2003) (invited).

70. *Quasi-two-dimensional Fermi liquid properties of the unconventional superconductor Sr_2RuO_4*
C. Bergemann, A.P. Mackenzie, S.R. Julian, D. Forsythe and E. Ohmichi, *Advances in Physics* **52**, 639 (2003) (invited).

71. *Transport spin polarisation in SrRuO₃ measured through point contact Andreev reflection*
P. Raychaudhuri, A.P. Mackenzie, J.W. Reiner and M.R. Beasley, Phys. Rev. B **67**, 020411 (2003).
72. *Effects of in-plane impurity substitution in Sr₂RuO₄*
N. Kikugawa, A.P. Mackenzie and Y. Maeno, J. Phys. Soc. Jpn. **72**, 237 (2003).
73. *Angular dependence of the magnetic susceptibility in the itinerant metamagnet Sr₃Ru₂O₇*
S.A. Grigera, R.A. Borzi, S.R. Julian, R.S. Perry, Y. Maeno and A.P. Mackenzie, Phys. Rev. B **67**, 214427 (2003).
74. *Coherent Three-Dimensional Fermi Surface in a High-Temperature Superconductor*
N.E. Hussey, M. Abdel-Jawad, A. Carrington, A.P. Mackenzie and L. Balicas, Nature **425**, 814 (2003).
75. *Rigid-band shift of the Fermi Level in a Correlated Electron Metal: Sr_{2-y}La_yRuO₄*
N. Kikugawa, A.P. Mackenzie, C. Bergemann, R.A. Borzi, S.A. Grigera and Y. Maeno, Phys. Rev. B **70**, 060508 (2004)
76. *Multiple First-Order Metamagnetic Transitions and Quantum Oscillations in Ultra-pure Sr₃Ru₂O₇*
R.S. Perry, K. Kitagawa, S.A. Grigera, R.A. Borzi, A.P. Mackenzie, K. Ishida and Y. Maeno, Phys. Rev. Lett. **92**, 166602 (2004).
77. *Electronic Properties of the Layered Perovskite Ruthenates: Correlated Electron Physics Approaching the Low-Disorder Limit*
A.P. Mackenzie and S.A. Grigera, J. Low Temp. Phys. **135**, 39 (2004).
78. *de Haas-van Alphen Effect Across the Metamagnetic Transition in Sr₃Ru₂O₇*
R.A. Borzi, S.A. Grigera, R.S. Perry, N. Kikugawa, K. Kitagawa, Y. Maeno and A.P. Mackenzie, Phys. Rev. Lett **92**, 216403 (2004).
79. *Low Temperature Hall Effect in Substituted Sr₂RuO₄*
N. Kikugawa, A.P. Mackenzie, C. Bergemann and Y. Maeno, Phys. Rev. B **70**, 174501 (2004).
80. *Band-Selective Modification of the Magnetic Fluctuations in Sr₂RuO₄: Study of Substitution Effects*
N. Kikugawa, C. Bergemann, A.P. Mackenzie and Y. Maeno, Phys. Rev. B **70**, 134520 (2004).
81. *Disorder-Sensitive Phase Formation Linked to Metamagnetic Quantum Criticality*
S.A. Grigera, P. Gegenwart, R. A. Borzi, F. Weickert, A. J. Schofield, R.S. Perry, T. Tayama, T. Sakakibara, Y. Maeno, A. G. Green & A. P. Mackenzie, Science **306**, 1155 (2004).

82. *Phase Bifurcation and Quantum Fluctuations in $Sr_3Ru_2O_7$*
A. G. Green, S. A. Grigera, R. A. Borzi, A. P. Mackenzie, R. S. Perry and B. D. Simons,
Phys. Rev. Lett. **95**, 086402 (2005).
83. *A Quantum Critical Route to Field-Induced Superconductivity*, A.P. Mackenzie &
S.A. Grigera, Science **309**, 1330 (2005). (invited Perspective)
84. *Nested Fermi Surface and Electronic Instability in $Ca_3Ru_2O_7$*
F. Baumberger, N.J.C. Ingle, N. Kikugawa, M.A. Hossain, W. Meevasana, R.S. Perry,
K.M. Shen, D.H. Lu, A. Damascelli, A. Rost, A.P. Mackenzie, Z. Hussain, and Z.-X.
Shen, Phys. Rev. Lett. **96**, 107601 (2006).
85. *Fermi surface and quasiparticle excitations of Sr_2RhO_4*
F. Baumberger, N.J.C. Ingle, W. Meevasana, K.M. Shen, D.H. Lu, R.S. Perry, A.P.
Mackenzie, Z. Hussain, D.J. Singh and Z.-X. Shen, Phys. Rev. Lett. **96**, 246402 (2006).
86. *Quantum oscillations in high quality single crystals of the layered perovskite
 Sr_2RhO_4*
R. S. Perry, N. Kikugawa, L. Balicas, A. Rost, J. F. Mercure, Y. Maeno and A. P.
Mackenzie, submitted to Phys. Rev. Lett. (2006).
87. *Sr_2RhO_4 : A new, clean correlated electron metal*
R. S. Perry, F. Baumberger, L. Balicas, N. Kikugawa, N.J.C. Ingle, A. Rost, J. F.
Mercure, Y. Maeno, Z.X. Shen and A. P. Mackenzie, New Journal of Physics **8**, 175
(2006).
88. *Thermal conductivity in the vicinity of the quantum critical endpoint in $Sr_3Ru_2O_7$*
F. Ronning, R.W. Hill, M. Sutherland, D.G. Hawthorn, M.A. Tanatar, J. Paglione, Louis
Taillefer, M. Graf, R.S. Perry, Y. Maeno and A.P. Mackenzie, Phys. Rev. Lett. **97**,
067005 (2006).
89. *Anisotropic scattering and anomalous normal-state transport in a high-temperature
superconductor*
M. Abdel-Jawad, M. P. Kennett, L. Balicas, A. Carrington, A. P. Mackenzie, R. H.
McKenzie, N. E. Hussey, Nature Physics **2**, 821 (2006).
90. *Formation of a nematic fluid at high fields in $Sr_3Ru_2O_7$*
R.A. Borzi, S.A. Grigera, J. Farrell, R.S. Perry, S. Lister, S.L. Lee, D.A. Tennant, Y.
Maeno & A.P. Mackenzie, Science **315**, 214 (2007).
91. *Evolution of the Fermi Surface and Quasiparticle Renormalization through a van
Hove Singularity in the Correlated Metal $Sr_{2-y}La_yRuO_4$*
K.M. Shen, N. Kikugawa, C. Bergemann, L. Balicas, F. Baumberger, W. Meevasana, N.J.C.
Ingle, Y. Maeno, Z.-X. Shen & A.P. Mackenzie, Phys. Rev. Lett. **99**, 187001 (2007).

92. *Ca₃Ru₂O₇: Electronic instability and extremely strong quasiparticle renormalisation*
N. Kikugawa, A. Rost, F. Baumberger, N.J.C. Ingle, M.A. Hossain, W. Meevasana, K.M. Shen, D.J. Lu, A. Damascelli, A.P. Mackenzie, Z. Hussain and Z.X. Shen, *J. Mag. Mag. Mat.* **310**, 1027 (2007).
93. *Heavy fermions in the original Fermi liquid*
C.A. Hooley and A.P. Mackenzie, *Science* **317**, 1332 (2007) (invited Perspective).
94. *Quantum oscillations in an overdoped high temperature superconductor*
B. Vignolle, A. Carrington, R. A. Cooper, M. M. J. French, A. P. Mackenzie, C. Jaudet, D. Vignolles, Cyril Proust & N. E. Hussey, *Nature* **455**, 952 (2008).
95. *De Haas van Alphen oscillations in the charge-density wave compound lanthanum tritelluride (LaTe₃)*
N. Ru, R. A. Borzi, A. Rost, A. P. Mackenzie, J. Laverock, S. B. Dugdale, & I. R. Fisher, *Phys. Rev. B* **78** 045123 (2008).
96. *Fermi surface and van Hove singularities in the itinerant metamagnet Sr₃Ru₂O₇*
A. Tamai, M.P. Allan, J.F. Mercure, W. Meevasana, R. Dunkel, D.H. Lu, R.S. Perry, A.P. Mackenzie, D.J. Singh, Z.-X. Shen, and F. Baumberger, *Phys. Rev. Lett.* **101**, 026407 (2008).
97. *Effect of electron doping the metamagnet La_ySr_{3-y}Ru₂O₇*
J. Farrell, R. S. Perry, A. Rost, J. F. Mercure, N. Kikugawa, S. A. Grigera & A. P. Mackenzie, *Phys. Rev. B* **78**, 180409(R) (2008).
98. *Physical properties of single-crystalline CaRuO₃ grown by a floating-zone method*
N. Kikugawa, L. Balicas and A.P. Mackenzie, *J. Phys. Soc. Jpn.* **78**, 014701 (2009).
99. *Incommensurate magnetic ordering in Ti-doped Sr₃Ru₂O₇*
P. Steffens, S. Price, J. Farrell, A.P. Mackenzie, Y. Sidis, K. Schmalzl, and M. Braden, *Phys. Rev. B* **79**, 054422 (2009).
100. *Microscopic Theory of the Nematic Phase in Sr₃Ru₂O₇*
S. Raghu, A. Paramakanti, E.-A. Kim, R. A. Borzi, S.A. Grigera, A. P. Mackenzie, and S. A. Kivelson, *Phys. Rev. B* **79**, 214402 (2009).
101. *Quantum oscillations in the anomalous phase in Sr₃Ru₂O₇*
J.-F. Mercure, S. K. Goh, E. C. T. O'Farrell, R. S. Perry, M. L. Sutherland, A. Rost, S. A. Grigera, R. A. Borzi, P. Gegenwart and A. P. Mackenzie, *Phys. Rev. Lett.* **103**, 176401 (2009).
102. *Entropy Landscape of Phase Formation Associated with Quantum Criticality in Sr₃Ru₂O₇*
A.W. Rost, R.S. Perry, J.F. Mercure, A.P. Mackenzie & S.A. Grigera, *Science* **325**, 1360 (2009).

103. *Heavy d-electron quasiparticle interference and real-space electronic structure of $Sr_3Ru_2O_7$*
J. Lee, M.P. Allan, M.A. Wang, J. Farrell, S.A. Grigera, F. Baumberger, J.C. Davis & A.P. Mackenzie, *Nature Physics* **11**, 800 (2009).
104. *$Ca_3Ru_2O_7$: Density wave formation and quantum oscillations in the Hall resistivity*
N. Kikugawa, A.W. Rost, C.W. Hicks, A.J. Schofield & A.P. Mackenzie, *J. Phys. Soc. Jpn* **79**, 024704 (2010).
105. *Quantum Phase Transitions in $NbFe_2$ and $Ca_3Ru_2O_7$*
W.J. Duncan, O.P. Welzel, D. Moroni-Klemetowicz, C. Albrecht, P.G. Niklowitz, D. Gruener, M. Brando, A. Neubauer, C. Pfleiderer, N. Kikugawa, A.P. Mackenzie & F.M. Grosche, *Phys. Stat. Solidi B* **247**, 544 (2010).
106. *Power law specific heat divergence in $Sr_3Ru_2O_7$*
A.W. Rost, A.M. Berridge, R.S. Perry, J.F. Mercure, S.A. Grigera & A.P. Mackenzie, *Phys. Stat. Solidi B* **247**, 513 (2010).
107. *Quantum oscillations near the metamagnetic transition in $Sr_3Ru_2O_7$*
J.F. Mercure, A.W. Rost, E.C.T. O'Farrell, S.W. Goh, R.S. Perry, M.L. Sutherland, S.A. Grigera, R.A. Borzi, P. Gegenwart, A.S. Gibbs & A.P. Mackenzie, *Phys. Rev. B* **81**, 235103 (2010).
108. *Nematic Fermi fluids in Condensed Matter Physics*
E. Fradkin, S.A. Kivelson, M.A. Lawler, J.P. Eisenstein & A.P. Mackenzie, *Annual Reviews of Condensed Matter Physics* **1**, 153 (2010) (invited).
109. *Unconventional magnetisation processes and thermal runaway in spin-ice $Dy_2Ti_2O_7$*
D. Slobinsky, R.A. Borzi, C. Castelnovo, A.S. Gibbs, A.P. Mackenzie, R. Moessner & S.A. Grigera, *Phys. Rev. Lett* **105**, 267205 (2010).
110. *Quantum critical metamagnetism of $Sr_3Ru_2O_7$ under hydrostatic pressure*
W. Wu, A. McCollam, S.A. Grigera, R.S. Perry, A.P. Mackenzie & S.R. Julian, *Phys. Rev. B* **83**, 045106 (2011).
111. *Spin-orbit coupling and k-dependent Zeeman splitting in strontium ruthenate*
E.J. Rozbicki, J.-R. Souquet, J.F. Annett & A.P. Mackenzie, *J. Phys. Cond. Matt.* **23**, 094201 (2011).
112. *Vortex imaging and vortex lattice transitions in superconducting Sr_2RuO_4 single crystals*
P. J. Curran, V. V. Khotkevych, S. J. Bending, A.S. Gibbs, S.L. Lee & A.P. Mackenzie, *Phys. Rev. B* **84**, 104507 (2011).
113. *Thermodynamics of phase formation in the quantum critical metal $Sr_3Ru_2O_7$*

A.W. Rost, S.A. Grigera, J.A.N. Bruin, R.S. Perry, D. Tian, S. Raghu, S.A. Kivelson & A.P. Mackenzie, Proc. Nat. Acad. Sci. **108**, 16549 (2011).

114. *Hall coefficient anomaly in the low-temperature high-field phase of $Sr_3Ru_2O_7$*
R.A. Borzi, A. McCollam, J.A.N. Bruin, R.S. Perry, A.P. Mackenzie & S.A. Grigera, Phys. Rev. B **84**, 205112 (2011).

115. *Anisotropic Energy Gaps of Iron-Based Superconductivity from Intraband Quasiparticle Interference in LiFeAs*
M. P. Allan, A. W. Rost, A. P. Mackenzie, Yang Xie, J. C. Davis, K. Kihou, C. H. Lee, A. Iyo, H. Eisaki and T.-M. Chuang, Science **336**, 563 (2012).

116. *Quantum criticality and the formation of a putative electronic liquid crystal in $Sr_3Ru_2O_7$*
A.P. Mackenzie, J.A.N. Bruin, R.A. Borzi, A.W. Rost and S.A. Grigera, Physica C **481**, 207 (2012) (invited)

117. *Quantum oscillations and high carrier mobility in the delafossite $PdCoO_2$*
C.W. Hicks, A.S. Gibbs, A.P. Mackenzie, H. Takatsu, Y. Maeno and E.A. Yelland, Phys. Rev. Lett. **109**, 116401 (2012).

118. *Fast sweep-rate plastic Faraday force magnetometer with simultaneous sample temperature measurement*
D. Slobinsky, R.A. Borzi, A.P. Mackenzie and S.A. Grigera, Rev. Sci. Inst. **83**, 125104 (2012)

119. *Similarity of scattering rates in metals showing T -linear resistivity*
J.A.N. Bruin, H. Sakai, R.S. Perry & A.P. Mackenzie, Science **339**, 804 (2013).

120. *Study of the electronic nematic phase of $Sr_3Ru_2O_7$ with precise control of the applied magnetic field vector*
J.A.N. Bruin, R.A. Borzi, S.A. Grigera, A.W. Rost, R.S. Perry and A.P. Mackenzie, Phys. Rev. B **87**, 161106 (2013).

121. *Imaging Cooper pairing of heavy fermions in $CeCoIn_5$*
M.P. Allan, F. Massee, D.K. Morr, J. van Dyke, A.W. Rost, A.P. Mackenzie, C. Petrovic and J.C. Davis, Nature Physics **9**, 468 (2013).

122. *Formation of heavy d -electron quasiparticles in $Sr_3Ru_2O_7$*
M.P. Allan, A. Tamai, E. Rozbicki, M.H. Fischer, J. Voss, P.D.C. King, W. Meevasana, S. Thirupathiah, E. Rienks, J. Fink, D A. Tennant, R.S. Perry, J. F. Mercure, M.A. Wang, Jinho Lee, C.J. Fennie, E.-A. Kim, M.J. Lawler, K.M. Shen, A.P. Mackenzie, Z.-X. Shen and F. Baumberger, New Journal of Physics **15**, 063029 (2013).

123. *Evidence from tunnelling spectroscopy for a quasi-one-dimensional origin of superconductivity in Sr_2RuO_4*

I.A. Firmo, S. Lederer, C. Lupien, A.P. Mackenzie, J.C. Davis and S. Kivelson, Phys. Rev. B **88** 134521 (2013).

124. *Pressure study of nematicity and quantum criticality in $Sr_3Ru_2O_7$ for an in-plane field*

D. Sun, W. Wu, S.A. Grigera, R.S. Perry, A.P. Mackenzie and S.R. Julian, Phys. Rev. B **88**, 235129 (2013).

125. *Strong increase of T_c of Sr_2RuO_4 under both tensile and compressive strain*

C.W. Hicks, D.O. Brodsky, E.A. Yelland, A.S. Gibbs, J.A.N. Bruin, M.E. Barber, S.D. Edkins, K. Nishimura, S. Yonezawa, Y. Maeno and A.P. Mackenzie, Science **344**, 283 (2014).

126. *Piezoelectric-based apparatus for strain tuning*

C.W. Hicks, M.E. Barber, S.D. Edkins, D.O. Brodsky and A.P. Mackenzie, Rev. Sci. Inst. **85**, 65003 (2014).

127. *Muon-spin rotation measurements of a low-field crossover from a triangular to a square vortex lattice and an unusual semi-Meissner state in Sr_2RuO_4*

S.J. Ray, A.S. Gibbs, S.J. Bending, P.J. Curran, E. Babaev, C. Baines, A.P. Mackenzie and S.L. Lee, Phys. Rev. B **89**, 094504 (2014).

128. *Search for spontaneous edge currents and vortex imaging in Sr_2RuO_4 mesostructures*

P.J. Curran, S.J. Bending, W.M. Desoky, A.S. Gibbs, S.L. Lee and A.P. Mackenzie, Phys. Rev. B **89**, 144504 (2014).

129. *Quantum Oscillations and Magnetic Reconstruction in the Delafossite $PdCrO_2$*

C.W. Hicks, A.S. Gibbs, L. Zhao, P. Kushwaha, H. Borrmann, A. P. Mackenzie, H. Takatsu, S. Yonezawa, Y. Maeno and E. A. Yelland, Phys. Rev. B **92**, 014425 (2015).

130. *Nearly-free electrons in a 5d delafossite oxide metal*

P. Kushwaha, V. Sunko, P. J. W. Moll, L. Bawden, J. M. Riley, N. Nandi, H. Rosner, F. Arnold, E. Hassinger, T. K. Kim, M. Hoesch, A. P. Mackenzie and P. D. C. King, Science Advances **1**, 1500692 (2015).

131. *Atomic-scale electronic structure of the cuprate d -symmetry form factor density wave state*

M. H. Hamidian, S.D. Edkins, Chung Koo Kim, J. C. Davis, A. P. Mackenzie, H. Eisaki, S. Uchida, M. J. Lawler, E.-A. Kim, S. Sachdev, and K. Fujita, Nature Physics **12**, 150 (2016).

132. *Evidence for hydrodynamic electron flow in $PdCoO_2$*

P.J.W. Moll, P. Kushwaha, N. Nandi, B. Schmidt and A.P. Mackenzie, arXiv:1509.05691, Science **351**, 1061 (2016).

133. *Epitaxial Strain Control of Fermi Surface Topology and Quasiparticle Interactions*

in the Spin-Triplet Ruthenate Superconductors

B. Burganov, C. Adamo, A. Mulder, M. Uchida, P.D.C. King, J. Harter, D.E. Shai, A.P. Mackenzie, M.R. Beasley, C. Fennie, D. G. Schlom and K.M. Shen, Phys. Rev. Lett. **116**, 197003 (2016).

134. *Distortions in spin-ice: disorder and the intermediate state*

R.A. Borzi, F.A. Gómez Albarracin, H.D. Rosales, G.L. Rossini, A. Steppke, T.S. Grigera, D. Prabhakaran, A.P. Mackenzie, D. C. Cabra and S. A. Grigera, Nature Communications **7**, 12592 (2016).

135. *Detection of a Pair Density Wave in $Bi_2Sr_2CaCu_2O_{8+x}$ Using Scanned Josephson Tunneling*

M. H. Hamidian, S. D. Edkins, Sang Hyun Joo, A. Kostin, H. Eisaki, S. Uchida, M. J. Lawler, E.-A. Kim, A. P. Mackenzie, K. Fujita, Jinho Lee and J. C. Davis, arXiv:1511.08124, Nature **532**, 343 (2016).

136. *Field-Temperature Phase Diagram and Entropy Landscape of $CeAuSb_2$*

Lishan Zhao, Edward A. Yelland, Jan A.N. Bruin, Ilya Sheikin, Paul C. Canfield, Veronika Fritsch, Hideaki Sakai, Andrew P. Mackenzie, Clifford W. Hicks, arXiv:1602.06742, Phys. Rev. B **93**, 195124 (2016).

137. *Strain and Vector-Magnetic-Field Tuning of the Anomalous Phase in $Sr_3Ru_2O_7$*

D. Brodsky, M.E. Barber, J.A.N. Bruin, R.A. Borzi, S.A. Grigera, R.S. Perry, A.P. Mackenzie and C.W. Hicks, arXiv:1512.04216, Science Advances **3**, e1501804 (2017).

138. *Strong Peak in T_c of Sr_2RuO_4 under uniaxial pressure*

A. Steppke, L. Zhao, M.E. Barber, T. Scaffidi, F. Jerzembeck, H. Rosner, A.S. Gibbs, Y. Maeno, S.H. Simon, A.P. Mackenzie and C.W. Hicks, arXiv:1604.06669; Science **355**, aaf9398 (2017).

139. *The properties of ultra-pure delafossite metals*

A.P. Mackenzie, Rep. Prog. Phys. **80**, 032501 (2017).

140. *Charge density wave quantum critical point with strong enhancement of superconductivity*

T. Gruner, D. Jang, Z. Huesges, R. Cardoso-Gil, G.H. Fecher, M.M. Koza, O. Stockert, A.P. Mackenzie, M. Brando and C. Geibel, Nature Physics **13**, 967 (2017).

141. *Emergent Weyl fermion excitations in TaP explored by ^{181}Ta quadrupole resonance*

H. Yasuoka, T. Kubo, Y. Kishimoto, D. Kasinathan, M. Schmidt, B. Yan, Y. Zhang, H. Tou, C. Felser, A. P. Mackenzie and M. Baenitz, Phys. Rev. Lett. **118**, 236403 (2017).

142. *Cascade of magnetic field induced Lifshitz transitions in the Kondo lattice material $YbNi_4P_2$*

H. Pfau, R. Daou, S. Karbassi, S. Friedemann, S. Ghannadzadeh, R. Kuchler, S. Hamann,

A. Steppke, D. Sun, M. König, A. P. Mackenzie, K. Kliemt, C. Krellner, and M. Brando, Phys. Rev. Lett. **119**, 126402 (2017).

143. *Maximal Rashba-like spin splitting via kinetic-energy-coupled inversion-symmetry breaking*

V. Sunko, H. Rosner, P. Kushwaha, L. Bawden, O. J. Clark, J. M. Riley, D. Kasinathan, M. W. Haverkort, T. K. Kim, M. Hoesch, J. Fujii, I. Vobornik, A. P. Mackenzie, and P. D. C. King, arXiv:1708.03887, Nature **549**, 492 (2017).

144. *Single crystal growth, structure and electronic properties of the metallic delafossite PdRhO₂*

P. Kushwaha, H. Borrmann, S. Khim, H. Rosner, P.J.W. Moll, D. Sokolov, V. Sunko, Yu. Grin and A.P. Mackenzie, arXiv:1706.07614, Crystal Growth and Design **17**, 4144 (2017).

145. *Even odder after twenty-three years: the superconducting order parameter puzzle of Sr₂RuO₄*

A.P. Mackenzie, T. Scaffidi, C.W. Hicks and Y. Maeno, arXiv:1706.01942, npj Quantum Materials **2**, 40 (2017).

146. *Kondo topological insulators: negative pressure tuning*

A.P. Mackenzie and C.W. Hicks, Nature Materials **16**, 702 (2017).

147. *Hydrodynamic electron flow and Hall viscosity*

T. Scaffidi, N. Nandi, B. Schmidt, A.P. Mackenzie and J.E. Moore, Phys. Rev. Lett. **118**, 226601 (2017) (Editor's Suggestion).

148. *Quasi two-dimensional Fermi surface topography of the delafossite PdRhO₂*

F. Arnold, M. Naumann, S. Khim, H. Rosner, V. Sunko, F. Mazzola, P.D.C. King, A.P. Mackenzie and E. Hassinger, arXiv:1706.08865; Phys. Rev. B **96**, 075163 (2017).

149. *Application of SQUIDs to low temperature and high magnetic field measurements - ultra low noise torque magnetometry*

F. Arnold, M. Naumann, T. Luehmann, A.P. Mackenzie and E. Hassinger, arXiv:1706.08350; Rev. of Sci. Inst. **89**, 023901 (2018).

150. *Effect of Applied Orthorhombic Lattice Distortion on the Antiferromagnetic Phase of CeAuSb₂*

J. Park, H. Sakai, O. Erten, A.P. Mackenzie and C.W. Hicks, Phys. Rev. B **97**, 024411 (2018).

151. *Resistivity in the Vicinity of a Van Hove Singularity: Sr₂RuO₄ Under Uniaxial Pressure*

M.E. Barber, A.S. Gibbs, Y. Maeno, A.P. Mackenzie and C.W. Hicks, arXiv:1709.06545; Phys. Rev. Lett. **120**, 076602 (2018).

152. *Itinerant ferromagnetism of the Pd-terminated polar surface of PdCoO₂*
F. Mazzola, V. Sunko, S. Khim, H. Rosner, P. Kushwaha, O. J. Clark, L. Bawden, I. Markovic, T. K. Kim, M. Hoesch, A. P. Mackenzie, and P. D. C. King,
arXiv:1710.05392, PNAS **51**, 12956 (2018).
153. *Low temperature thermodynamic investigation of the phase diagram of Sr₃Ru₂O₇*
D. Sun, A.W. Rost, R.S. Perry, A.P. Mackenzie and M. Brando, Phys. Rev. B **97**, 115101 (2018).
154. *Searching for gap zeros in Sr₂RuO₄ via field-angle-dependent specific-heat measurement*
S. Kittaka, S. Nakamura, T. Sakakibara, N. Kikugawa, T. Terashima, S. Uji, D. A. Sokolov, A. P. Mackenzie, K. Irie, Y. Tsutsumi, K. Suzuki and K. Machida, J. Phys. Soc. Jpn. **87**, 093703 (2018).
155. *Magnetic-field induced pair density wave state in the cuprate vortex halo*
S.D. Edkins, A. Kostin, K. Fujita, A. P. Mackenzie, H. Eisaki, S. Uchida, M. J. Lawler, E-A. Kim, J.C. Davis and M. H. Hamidian, Science **364**, 976 (2019).
156. *Uniaxial Pressure Control of Competing Orders in a High Temperature Superconductor*
H.-H. Kim, S. M. Souliou, M.E. Barber, E. Lefrancois, M. Minola, M. Tortora, R. Heid, N. Nandi, R. A. Borzi, G. Garbarino, A. Bosak, J. Porras, T. Loew, M. König, P.J.W. Moll, A. P. Mackenzie, B. Keimer, C. W. Hicks and M. Le Tacon, Science **362**, 1040 (2018).
157. *Unconventional magneto-transport in ultrapure PdCoO₂ and PtCoO₂*
N. Nandi, T. Scaffidi, P. Kushwaha, S. Khim, M.E. Barber, V. Sunko, F. Mazzola, P.D.C. King, H. Rosner, P.J.W. Moll, M. König, J.E. Moore, S.A. Hartnoll and A.P. Mackenzie, arXiv:1804.01896, npj Quantum Materials **3**, 66 (2018).
158. *Effect of uniaxial stress on the magnetic phases of CeAuSb₂*
J. Park, H. Sakai, A.P. Mackenzie and C.W. Hicks, Phys. Rev. B **98**, 024426 (2018).
159. *Micron-scale measurements of low anisotropic strain response of local T_c in Sr₂RuO₄*
C.A. Watson, A.S. Gibbs, A.P. Mackenzie, C.W. Hicks and K.A. Moler, arXiv: 1807.07197, Phys. Rev. B **98**, 094521 (2018) (Editor's Suggestion).
160. *Piezoelectric-based uniaxial pressure cell with integrated force and displacement sensors*
M.E. Barber, A. Steppke, A.P. Mackenzie and C.W. Hicks, arXiv:1810.09573; Rev. Sci. Inst. **90**, 023904 (2019).
161. *Normal state ¹⁷O NMR studies of Sr₂RuO₄ under uniaxial stress*

Y. Luo, P. Guzman, A. P. Dioguardi, A. Pustogow, S. M. Thomas, F. Ronning, N. Kikugawa, D. Sokolov, F. Jerzembeck, A. P. Mackenzie, C. W. Hicks, E. D. Bauer, I. I. Mazin, and S. E. Brown arXiv:1810.01209, Phys. Rev. X **9**, 021044 (2019)

162. *Metamagnetic texture in a polar antiferromagnet*

D. A. Sokolov, N. Kikugawa, T. Helm, H. Borrmann, U. Burkhardt, R. Cubitt, E. Ressouche, M. Bleuel, K. Kummer, A. P. Mackenzie and U. K. Rößler, arXiv:1810.06247, Nature Physics **15**, 671 (2019)

163. *Perfect separation of intraband and interband excitations of PdCoO₂*

C. C. Homes, S. Khim, and A. P. Mackenzie, arXiv:1811.01026, Phys. Rev. B **99**, 195127 (2019)

164. *Multicritical Fermi surface topological transitions*

D.V. Efremov, A. Shtyk, A.W. Rost, C. Chamon, A.P. Mackenzie and J.J. Betouras, arXiv:1810.13392, Phys. Rev. Lett. **123**, 207202 (2019)

165. *Improved Single-Crystal Growth of Sr₂RuO₄*

J.S. Bobowski, N. Kikugawa, T. Miyoshi, H. Suwa, S. Yonezawa, D.A. Sokolov, A.P. Mackenzie and Y. Maeno, Cond. Matter **4**, 6 (2019)

166. *High-resolution photoemission on Sr₂RuO₄ reveals correlation-enhanced effective spin-orbit coupling and dominantly local self-energies*

A. Tamai, M. Zingl, E. Rozbicki, E. Cappelli, S. Ricco, A. de la Torre, S. McKeown Walker, F. Y. Bruno, P.D.C. King, W. Meevasana, M. Shi, M. Radovic, N.C. Plumb, A.S. Gibbs, A.P. Mackenzie, C. Berthod, H. Strand, M. Kim, A. Georges & F. Baumberger arXiv:1812.06531; Phys. Rev. X **9**, 021048 (2019)

167. *Hidden Kagome-lattice picture and origin of high conductivity in delafossite PtCoO₂*

H. Usui, M. Ochi, S. Kitamura, T. Oka, D. Ogura, H. Rosner, M.W. Haverkort, V. Sunko, P.D.C. King, A.P. Mackenzie, and K. Kuroki, arXiv: 1812.07213, Phys. Rev. Mat. **3**, 045002 (2019) (Editor's Suggestion)

168. *Super-geometric electron focusing on the hexagonal Fermi surface of PdCoO₂*

M.D. Bachmann, A.L. Sharpe, A.W. Barnard, C. Putzke, M. König, S. Khim, D. Goldhaber-Gordon, A. P. Mackenzie and P.J.W. Moll, arXiv:1902.03769; Nature Communications **10**, 5081 (2019)

169. *Direct Observation of a Uniaxial Strain-driven Lifshitz Transition in Sr₂RuO₄*

V. Sunko, E. Abarca Morales, I. Marković, M.E. Barber, D. Milosavljević, F. Mazzola, D. Sokolov, N. Kikugawa, C. Cacho, P. Dudin, H. Rosner, C.W. Hicks, P.D.C. King and A.P. Mackenzie, arXiv:1903.09581; npj Quantum Materials **4**, 46 (2019)

170. *Pronounced drop of ¹⁷O NMR Knight shift in the superconducting state of Sr₂RuO₄*

A. Pustogow, Yongkang Luo, A. Chronister, Y.-S. Su, D.A. Sokolov, F. Jerzembeck, A. P. Mackenzie, C. W. Hicks, N. Kikugawa, S. Raghu, E. D. Bauer, and S. E. Brown, arXiv:1904.00047; Nature **574**, 72 (2019)

171. *Spatial control of heavy-fermion superconductivity in CeIrIn₅*

M.D. Bachmann, G.M. Ferguson, F. Theuss, T. Meng, C. Putzke, T. Helm, K.R. Shirer, Y.-S. Li, K. Modic, M. Nicklas, M. König, D. Low, S. Ghosh, A. P. Mackenzie, F. Arnold, E. Hassinger, R.D. McDonald, L. Winter, E. D. Bauer, F. Ronning, B.J. Ramshaw, K.C. Nowak and P. J.W. Moll, Science **366**, 221 (2019)

172. *Magnetic frustration and spontaneous rotational symmetry breaking in PdCrO₂*

D. Sun, D.A. Sokolov, J. Bartlett, J. Sannigrahi, S. Khim, P. Kushwaha, D. D. Khalyavin, P. Manuel, A.S. Gibbs, A.P. Mackenzie and C.W. Hicks, arXiv:1904.11933; Phys. Rev. B **100**, 094414 (2019) (Editor's Suggestion)

173. *Evidence for a Vestigial Nematic State in the Cuprate Pseudogap Phase*

S. Mukhopadhyay, R. Sharma, C.K. Kim, S.D. Edkins, M.H. Hamidian, H. Eisaki, S. Uchida, E.-A. Kim, M. J. Lawler, A.P. Mackenzie, J.C. Séamus Davis and K. Fujita, PNAS **116** 13249 (2019)

174. *In situ modification of delafossite-type PdCoO₂ bulk single crystal for reversible hydrogen sorption and fast hydrogen evolution*

G. Li, S. Khim, C.S. Chang, C. Fu, N. Nandi, F. Li, Q. Yang, G. Blake, S.S.P. Parkin, G. Auffermann, Y. Sun, D.A. Muller, A.P. Mackenzie and C. Felser, ACS Energy Letters **4**, 9, 2185 (2019)

175. *Out-of-plane transport in ZrSiS and ZrSiSe microstructures*

K.R. Shirer, K.A. Modic, T. Zimmerling, M.D. Bachmann, M. König, P.J.W. Moll, L. Schoop and A.P. Mackenzie, APL Materials **7**, 101116 (2019)

176. *A personal perspective on the unconventional superconductivity of Sr₂RuO₄*

A. P. Mackenzie, Journal of Superconductivity and Novel Magnetism **33**, 177 (2020). Early access: <https://doi.org/10.1007/s10948-019-05312-4>

177. *A key role of correlation effects in the Lifshitz transition in Sr₂RuO₄*

M.E. Barber, F. Lechermann, S.V. Streltsov, S.L. Skornyakov, Sayak Ghosh, B.J. Ramshaw, N. Kikugawa, D.A. Sokolov, A.P. Mackenzie, C.W. Hicks and I.I. Mazin, arXiv:1909.02743; Phys. Rev. B **100**, 245139 (2019) (Editor's suggestion)

178. *Probing spin correlations using angle resolved photoemission in a coupled metallic/Mott insulator system*

V. Sunko, F. Mazzola, S. Kitamura, S. Khim, P. Kushwaha, O.J. Clark, M. Watson, I. Marković, D. Biswas, L. Pourovskii, T.K. Kim, T.-L. Lee, P.K. Thakur, H. Rosner, A. Georges, R. Moessner, T. Oka, A.P. Mackenzie and P.D.C. King, arXiv:1809.08972, Science Advances **6**, eaaz0611 (2020)

179. *Momentum resolved superconducting energy gaps of Sr₂RuO₄ from quasiparticle interference imaging*
R. Sharma, S.D. Edkins, Z. Wang, A. Kostin, Y. Maeno, A.P. Mackenzie, J.C.S. Davis and V. Madhavan, arXiv:1912.02798, PNAS **117**, 5222 (2020)
180. *An alternative micro-size route for studying the intrinsic properties of solid-state materials.*
I. Antonyshyn, M. Bobnar, O. Sichevych, F.R. Wagner, U. Burkhardt, M. Schmidt, M. König, K. Poeppelmeier, A.P. Mackenzie, E. Svanidze, Yu. Grin, Angewandte Chemie <https://doi.org/10.1002/anie.202002693>
181. *h/e Oscillations in interlayer transport of delafossites*
C. Putzke, M.D. Bachmann, P. McGuinness, E. Zhakina, V. Sunko, M. Konczykowski, T. Oka, R. Moessner, A. Stern, M. König, S. Khim, A.P. Mackenzie and P.J.W. Moll, arXiv:1902.0733; Science **368**, 1234 (2020)
182. *The Fermi surface of PtCoO₂ from quantum oscillations and electronic structure calculations*
F. Arnold, M. Naumann, H. Rosner, N. Kikugawa, D. Graf, L. Balicas, T. Terashima, S. Uji, H. Takatsu, S. Khim, A.P. Mackenzie and E. Hassinger, arXiv:1912.13071, Phys. Rev. B **101**, 195101 (2020)
183. *Controlled introduction of defects to delafossite metals by electron irradiation*
V. Sunko, P.H. McGuinness, C.S. Chang, E. Zhakina, S. Khim, C.E. Dreyer, M. Konczykowski, H. Borrmann, P.J.W. Moll, M. König, D.A. Muller and A.P. Mackenzie, arXiv:2001.01471; Phys. Rev. X **10**, 021018 (2020)
184. *Electronically driven spin-reorientation transition of the correlated polar metal Ca₃Ru₂O₇*
I. Marković, M. D. Watson, O. J. Clark, F. Mazzola, E. Abarca Morales, C. A. Hooley, H. Rosner, C. M. Polley, T. Balasubramanian, S. Mukherjee, N. Kikugawa, D. A. Sokolov, A. P. Mackenzie and P. D. C. King arXiv:2001.09499; Proc. Nat. Acad. Sci. **117**, 15524 (2020)
185. *Thermodynamic Evidence for a Two-Component Superconducting Order Parameter in Sr₂RuO₄*
S. Ghosh, A. Shekhter, F. Jerzembeck, N. Kikugawa, D.A. Sokolov, A. P. Mackenzie, C.W. Hicks and B. J. Ramshaw, arXiv2002.06130; Nature Physics **17**, 199 (2021) doi.org/10.1038/s41567-020-1032-4 (2020)
186. *Rigid platform to apply large tunable strains to mechanically delicate samples*
J. Park, J.M. Bartlett, H.M.L. Noad, A. Stern, M.E. Barber, M. Koenig, S. Hosoi, T. Shibauchi, A.P. Mackenzie, A. Steppke and C.W. Hicks, Review of Scientific Instruments **91**, 083902 (2020)

187. *Atomic-scale Electronic Structure of the Cuprate Pair Density Wave State Coexisting with Superconductivity*
P. Choubey, S. Joo, K. Fujita, Z. Du, S. D. Edkins, M. H. Hamidian, H. Eisaki, S. Uchida, A. P. Mackenzie, J. Lee, J.C.S. Davis and P.J. Hirschfeld, arXiv: 2002.11654; Proc. Nat. Acad. Sci. **117**, 14805 (2020)
188. *Surface and bulk electronic structure of aluminium diboride*
V. Sunko, D. Milosavljevic, F. Mazzola, O. J. Clark, U. Burkhardt, T. K. Kim, H. Rosner, Y. Grin, A. P. Mackenzie and P. D. C. King, Phys. Rev. B **102**, 035143 (2020)
189. *Band structure determination in quantum materials: a direct comparison of ARPES, STM and quantum oscillation data from the correlated metal Sr_2RhO_4*
I. Battisti, W. Tromp, R.S. Perry, A.P. Mackenzie, A. Tamai, S. Ricco, F. Baumberger, M.P. Allan, npj Quantum Materials **5**, 91 (2020)
190. *Piezoelectric-driven uniaxial pressure cell for muon spin relaxation and neutron scattering experiments*
S. Ghosh, F. Brückner, A. Nikitin, V. Grinenko, M. Elender, A.P. Mackenzie, H. Luetkens, H.-H. Klauss, and C. W. Hicks, Review of Scientific Instruments **91**, 103902 (2020)
191. *Heat-capacity measurements under uniaxial pressure using a piezo-driven device*
Y.-S. Li, R. Borth, C. W. Hicks, A. P. Mackenzie and M. Nicklas, Review of Scientific Instruments **91**, 103903 (2020)
192. *A new stress dilatometer and measurement of the thermal expansion under uniaxial stress of Mn_3Sn*
M. Ikhlas, K.R. Shirer, P.-Y. Yang, A.P. Mackenzie, S. Nakatsuji and C.W. Hicks, Applied Physics Letters **117**, 233502 (2020)
193. *Charge density waves in $YBa_2Cu_3O_{6.67}$ probed by resonant x-ray scattering under uniaxial compression*
H.-H. Kim, E. Lefrançois, K. Kummer, R. Fumagalli, N. Brookes, D. Betto, S. Nakata, M. Tortora, J. Porras, T. Loew, M.E. Barber, L. Braicovich, G. Ghiringhelli, A.P. Mackenzie, C. W. Hicks, B. Keimer, M. Minola, and M. Le Tacon, Phys. Rev. Lett. **126**, 037002 (2021)
194. *Split superconducting and time-reversal symmetry-breaking transitions and magnetic order in Sr_2RuO_4 under uniaxial stress*
V. Grinenko, S. Ghosh, R. Sarkar, J.-C. Orain, A. Nikitin, M. Elender, D. Das, Z. Guguchia, F. Brückner, M. E. Barber, J. Park, N. Kikugawa, D.A. Sokolov, J.S. Bobowski, T. Miyoshi, Y. Maeno, A.P. Mackenzie, H. Luetkens, C.W. Hicks and H.-H. Klauss, arXiv:2001.08152, Nature Physics <https://doi.org/10.1038/s41567-021-01182-7> (2021)
195. *High precision heat capacity measurements on Sr_2RuO_4 under uniaxial pressure*

Y.-S. Li, N. Kikugawa, D.A. Sokolov, F. Jerzembeck, A.S. Gibbs, C. W. Hicks, Y. Maeno, J. Schmalian, M. Nicklas and A.P. Mackenzie, arXiv:1906.07597; Proc. Nat. Acad. Sci. **118**, e2020492118 (2021)

196. *Quasi-particle interference and quantum confinement in a correlated Rashba spin-split 2D electron liquid*

C. M. Yim, D. Chakraborti, L.C. Rhodes, S. Khim, A.P. Mackenzie and Peter Wahl, Science Advances **7**, eabd7361 (2021)

197. *Single crystal growth of Sr_2RuO_4 by the floating-zone method using an infrared image furnace with improved halogen lamps*

N. Kikugawa, D.A. Sokolov, T. Nagasawa, and A. P. Mackenzie, Crystals **11**, 392 (2021)

198. *The relationship between transport anisotropy and nematicity in FeSe*

J. Bartlett, A. Steppke, S. Hosoi, H. Noad, J. Park, C. Timm, T. Shibauchi, A.P. Mackenzie and C.W. Hicks, Phys. Rev. X **11**, 021038 (2021)

199. *Evidence for even parity unconventional superconductivity in Sr_2RuO_4*

A. Chronister, A. Pustogow, N. Kikugawa, D. A. Sokolov, F. Jerzembeck, C. W. Hicks, A. P. Mackenzie, E. D. Bauer and S. E. Brown, arXiv:2007.13730; PNAS **118**, e2025313118 (2021)

200. *Field-induced transition from even to odd parity superconductivity in $CeRh_2As_2$*

S. Khim, J.F. Landaeta, J. Banda, N. Bannor, M. Brando, P.M.R. Brydon, D. Hafner, R. K uchler, R. Cardoso-Gil, U. Stockert, A.P. Mackenzie, D.F. Agterberg, C. Geibel and E. Hassinger, arXiv:2101.09522, to appear in Science, 27 Aug 2021